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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,361	12/03/2003	Andrew Jay Skoog	13DV-13673 (07783-0087)	7152

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EXAMINER	
TUROCY, DAVID P	
ART UNIT	**PAPER NUMBER**
1762	

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 10/726,361	**Applicant(s)** SKOOG ET AL.	
	Examiner David Turocy	**Art Unit** 1762	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 01 June 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: _____.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☒ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Detailed Action.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The submitted declaration has not been entered after final because the applicant has not present sufficient evidence why the declaration was not presented earlier. Additionally the examiner notes the declaration appears to contain only opinion that is not supported by factual evidence. It is well settled that arguments unsupported by competent factual evidence of record are entitled to little weight. *In re Payne, 606 F.2d 303,315,* 203 USPQ 245,256 (CCPA 1979). Additionally the declaration is not commensurate in scope with the finally rejected claims because the declaration is directed to deposition techniques on titanium and titanium is not required by the independent claims.

2. Applicant's arguments filed 3/9/2005 have been fully considered but they are not persuasive.

The applicant has argued against the Nagaraj reference stating the present invention does not include a barrier coating, which is deposited by the techniques as disclosed at column 4, lines 15-16 and one would be motivated to deposit the reflective coating on the substrate by such methods. The examiner respectfully disagrees. Nagaraj explicitly discloses any conventional methods for depositing the reflective coating and "conventional methods" is not limited to methods disclosed for another materially different coating. The examiner notes the claim only requires the presence of

the steps listed and does not limit the claim to exclude any other steps, which may include a thermal barrier coating as taught by Nagaraj or any other process steps.

The applicant argues against the Nagaraj reference stating that since Nagaraj discloses applying a TBC by method outside the scope of the invention and only discloses "conventional deposition techniques" for the reflective coating, such techniques logically being the same. The examiner respectfully disagrees that the teachings of Nagaraj naturally flow that the apparatus and method for coating for the two subsequent coatings are "logically" the same and cannot find evidence to suggest such. Argument's arguments must be considered mere attorney speculation not supported by evidence. *In re Scarborough*, 500 F.2d 560,566 182 USPQ 298,302 (CCPA 1974).

The applicant argues the examiner has conceded that Nagaraj teaches away from the techniques of depositing the metallic coating because the examiner did not dispute the assertion in the response to arguments. However, as above, it remains the examiners position that Nagaraj discloses conventional techniques and that the conventional techniques are not necessarily the same as though techniques explicitly disclosed for the TBC. Therefore the examiner has implicity disputed the assertion and therefore it remains the examiners position that Nagaraj does not teach away from the present deposition technique.

The applicant has argued against the Klabunde reference stating that it does not teach the use of a palladium, platinum, and/or gold coating as a "reflective coating". Klabunde is utilized here to show a known method of applying a metal coating on a

substrate includes forming substrate, and finally heating/firing to form the metal layer (Col 3, lines 35-65; Col 6, lines 30-54).a dispersion of metal particles and organic carrier, spraying the dispersion to the

The applicant argues against the Kirk-Othmer publication stating that the context of the Kirk-Othmer reference is directed toward internal workings of gas turbine engine and fails to teach heat-reflective coatings can be applied by spraying techniques. The examiner respectfully disagrees. The Kirk-Othmer publication, as a whole, is directed to known and conventional spraying techniques and discloses, on page 688 in Table 2, air-atomizing sprays is a known method of spraying coatings. Therefore, the Kirk-Othmer publication, reasonably suggests to one of ordinary skill in the art to utilize air-assisted spraying to coat a substrate. *Nagaraj discloses applying a noble metal coating onto a gas turbine substrate by any conventional method, Klabunde discloses applying a noble metal by using a dispersion of a noble metal and organic by spraying and Kirk-Othmer discloses air-assisted spraying is conventionally utilized in coating a substrate.* Therefore, it would have been obvious to one of ordinary skill at the time of the invention was made to apply the heat reflective layer of Nagaraj using conventional spraying as taught by Klabunde and specifically the conventional air-assisted spraying as disclosed by Kirk-Othmer because of the expectation of successfully applying the heat reflective layer coating on substrate.

The applicant has argued against the Kirk-Othmer reference stating that it does not teach any method for coating the surface of a gas turbine engine. While the examiner agrees Kirk-Othmer does not explicitly state coating the surface of a gas

turbine engine, *Nagaraj teaches coating, by a conventional method, a noble metal onto the surface of the gas turbine engine, Klabunde discloses noble metals are conventionally spraying onto surfaces to coat them, and Kirk-Othmer teaches conventional methods of coating substrates includes air-assisted spraying.* Therefore the examiner is not asserting that Kirk-Othmer directly teaches coating a gas turbine engine, only that they teach conventional spray coating methods and one of ordinary skill in the art would reasonably expect success in coating a turbine blade with an air-assisted process.

The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

The applicant has argued against the combination of references stating the totality of prior art discloses deposition techniques, which are not within the scope the present claims. The examiner respectfully disagrees and applies Klabunde as evidence to the contrary. The totality of the prior art does not disclose only depositing coatings by CVD and PVD as argued by the applicant.

The applicant has argued unexpected results, but as discussed above, such results are not accompanied by any factual evidence and therefore must be deemed mere speculation.

The applicant has argued against the examiners use of *In re Scarborough, 500 F.2d 560,566 182 USPQ 298,302 (CCPA 1974)* stating the applicant has stated the two techniques are "logically the same" which is based on a presumed similarity, see page 14 remarks. However, no factual evidence has clearly been presented that will show that the techniques are logically the same and therefore must be deemed mere attorney speculation.

The applicant has argued against the Driver reference stating that it teaches away from the present invention. The examiner respectfully disagrees. While Driver may disclose coating using different conditions, Driver is only utilized here as a showing that cobalt-based or titanium based alloys are known alternatives to nickel-based alloys for gas turbine engines.

The applicant has argued against the Eppler reference stating that it teaches away from the present invention because it teaches of air-assisted spraying within an enclosure. The examiner respectfully disagrees. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). While paragraph [0015] of the specification discloses air-assisted spraying is not limited to certain considerations such as special chambers, this limitation is not required by claim 14, therefore "air-assisted spraying" is given its broadest reasonable interpretation. The added limitation to claim 1 only modifies the method of applying the reflective-coating mixture and therefore is not limiting to the application of the ceramic barrier coating mixture.

The applicant has argued against the Demaray reference stating that it teaches away from the present invention because it teaches different coatings as well as different methods of application. The examiner agrees that the ceramic coating of Demaray is a thermal barrier coating rather then a reflective coating, however, Demaray suggests, to one of ordinary skill in the art, to polish the substrate prior to coating achieves a desired surface roughness and one skilled in the art would recognize that this roughening enhances adhesion of the coating.

The applicant has argued against the Rigney reference stating the reference does not teach a reflective coating and therefore is not properly combinable. The examiner agrees that the ceramic coating of Rigney is a thermal barrier coating rather then a reflective coating, however, Rigney suggests, to one of ordinary skill in the art, to oxidize the substrate prior to coating enhances the bonding between the superalloy and the subsequent coating.

The applicant has argued against the Tecle reference stating that it fails to disclose a method of applying a solvent including an encapsulant and fluxing agents. While the examiner agrees Tecle does not explicitly teach a method of application, Tecle reasonably suggests to one of ordinary skill in the art to provide a metallic particle/organic carrier solution with encapsulants to decrease the large amount of organic material required as well as fluxing agents to enhance the promotion of the coating to the substrate.

The applicant has argued against the Akechi reference stating that it teaches a thick paste and not therefore cannot be applied by the coating techniques of the present

invention. The examiner only utilizes Akechi as a showing that it is known in the art to provide a glass filler in a noble metal/organic carrier dispersion.

In response to applicant's argument that Akechi is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both the prior art and the present claims are directed to applying a metal/organic coating onto a substrate. In addition, Akechi clearly discloses including the filler material to provide passage for gas material at time of heating, so that the gas can easily pass through the passage to the surface (Page 4). Akechi goes on to say that film bulging and film tearing due to any residual gas can be completely prevented (Page 4). In addition, Klabunde teaches a of applying a metal coating on a substrate includes forming a dispersion of metal particles and organic carrier, spraying the dispersion to the substrate, and finally heating/firing to form the metal layer (Col 3, lines 35-65; Col 6, lines 30-54). Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Nagaraj et al. in view of Klabunde and further in view of Kirk-Othmer and Rigney et al. to use the glass frit/noble metal in an organic vehicle taught by Akechi to reap the benefits of providing a passage of gas for residual gases in the film to completely prevent film bulging and tearing upon heating.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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